

REMARKS

Only Claims 1 and 2 are being prosecuted in this application, Claims 3-12 having been cancelled.

Applicant has amended Claim 1 to clarify the present invention. As now amended, Claim 1 is to a metal seal disposed between a first contact flat face portion and a second contact flat face portion, the metal seal ring having a middle base portion of an approximately rectangular cross section and having a first short side forming an inner peripheral face and a second short side forming an outer peripheral face. A first contact convex portion is provided which contacts the first contact flat face portion, and a second contact convex portion is provided which contacts the second contact flat face portion in which the first contact convex portion is protruding from a position on an inner side of the middle base portion, adjacent the first short side and spaced from second short side, and the second contact convex portion is protruding from a position on an outer side of the middle base portion, adjacent the second short side and spaced from the first short side. Torsional elastic deformation turning around the middle base portion as a center is generated by a pressing force from the first contact flat face portion and the second contact flat face portion in an attached and compressed state, and the torsional elastic deformation returns to a free state when the first and second contact flat face portions are parted from each other.

Such a metal seal is not taught or suggested in the cited reference.

In the Office Action, Claims 1 and 2 were rejected under 35 U.S.C. §102(b) as anticipated by Tanner (U.S. 3,163,431). Reconsideration and removal of that rejection is respectfully requested in view of the present amendments to Claim 1 and the following remarks.

In the Office Action, it is alleged that Tanner shows the present claimed seal (referring specifically to FIGS. 12 and 13 of Tanner), where a metal seal ring 75 has a rectangular middle base portion with a first protruding convex portion 77 on an inner side of the base and a second protruding convex portion 78 on the outer side of the base, the convex portions having a half-circular cross-section. The Office Action also alleged that the convex portions cause torsional elastic deformation around the center of the base.

Claim 1, as amended, now provides that the middle base portion is of an approximately rectangular cross section having a first short side forming an inner peripheral face and a second short side forming an outer peripheral face, and a first contact convex portion protrudes from a position on an inner side of the middle base portion, adjacent the first short side and spaced from the second short side, while a second contact convex portion protrudes from an outer side of the middle base portion adjacent the second short side and spaced from the first short side. Such an arrangement is completely distinct from that of Tanner.

In addition, the present amendment to Claim 1 provides that the torsional elastic deformation of the seal return to a free state when the first and second contact flat face portions are parted from each other.

As described in line 21, page 38 to line 5, page 39 of the specification of the present application, because the torsional elastic deformation is generated in the whole seal in the attached and compressed state of the first and second contact flat face portions 1 and 2, the amount of elastic resilience (elastic deformation area) of the metal seal of the present invention is large. Therefore, high and stable sealability is always achieved in the space between the flat face

portions 1 and 2. It is the distinctive feature of the present invention that the elastic deformation and restoration of the seal can be conducted by a small generated outside force.

Contrary to this, the cylindrical seal 75 of Tanner which seals the cylindrical space between the members 80 and 83, requires a much larger force to be deformed so as to be radially decreased or expanded. And, when the seal is deformed, it can not be easily returned to the free state.


In view of the present amendments to the claims, and the above remarks, Claims 1 and 2 are believed to be patentable and early action towards allowance thereof is respectfully requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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